03500.010530.5

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	:	Examiner: George R. Fourson, III
Kiyofumi SAKAGUCHI, et al.	)	
	:	Group Art Unit: 2823
Application No.: 10/085,046	)	
	:	Confirmation No. 7805
Filed: March 1, 2002	)	
	:	
For: PROCESS FOR PRODUCTION OF SEMICONDUCTOR SUBSTRATE	) :	August 28, 2006

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO OFFICIAL ACTION,
REQUEST FOR DECLARATION OF INTERFERENCE,
PROPOSED COUNT AND TABLES OF SUPPORT

Sir:

Introductory Comments

In response to the July 28, 2006 Official Action, favorable reconsideration is earnestly solicited in view of the following remarks.

REMARKS

Reconsideration of the subject application is respectfully solicited.

Claims 77, 107, 129, 135, 136, 138, 139, 142, and 157 are pending, with all being independent. Those claims were copied in exact or modified form from four U.S. patents, U.S. Patent Nos. 6,107,213 (the "'213 patent"), 6,194,245 B1 (the "'245 patent"), 6,326,280 B1 (the "'280 patent"), and 6,426,274 B1 (the "'274 patent), as shown in the following Table:

TABLE

subject application claim	copied from
77	'213 Claim 20 (modified)
107	'213 Claim 20 (exact)
129	'245 Claim 7 (modified)
135	'280 Claim 1 (modified)
136	'280 Claim 1 (modified)
138	'280 Claim 2 (modified)
139	'280 Claim 2 (modified)
142	'280 Claim 4 (exact)
157	'274 Claim 16 (exact)

After the claims were copied, Sony, the assignee of those patents, disclaimed several claims, namely:

(a) '213 Claim 20 (Official Gazette, Vol. 1304, No. 3 (March 21, 2006));

(b) '280 Claim 4 (Official Gazette, Vol. 1304, No. 3 (March 21, 2006)); and

(c) '274 Claim 16 (on July 20, 2005, Sony filed a statutory disclaimer of '274 Claim 16, the filing having been made in a reissue application corresponding to

the '274 patent, namely Application No. 11/186,014; the disclaimer does not appear to have been published in the Official Gazette as of yet).

The Official Action, at page 2, acknowledged Sony's disclaimers, but stated (a) that the subject matter of Claims 77 and 107 interferes with '213 Claim 1; (b) that the subject matter of Claim 142 interferes with '280 Claim 2; and (c) that the subject matter of Claim 157 interferes with '274 Claim 1. And the Official Action required that Applicants, under 37 C.F.R. § 41.202(a), identify all claims believed to interfere, and/or propose one or more counts, and/or show how the claims correspond to one or more counts, provide a claim chart comparing at least one claim of each part and show why the claims interfere, provide a detailed explanation as to why applicant will prevail on priority, and provide claim charts showing written description for Claims 135, 136, 138, 139, 142, and 157.

In response, Applicants wish to provide the following remarks:

(1) <u>Identification of claims believed by Applicants to interfere</u>

Applicants identify the claims believed by Applicants to interfere as Claims 77, 107, 142, and 157 of the Subject Application, and the following three Sony claims, '213 Claim 1, '280 Claim 2, and '274 Claim 1.

(2) <u>Proposed count</u>

Applicants propose the following count:

Claim 77 of the subject application.

(3) <u>Showing how claims correspond to count</u>

Claim 77 is identical to the count.

Claim 107 and '213 Claim 1 define the same invention as Claim 77, as acknowledged at page 2 of the Official Action, and thus correspond to the count.

Claims 142 and 157 and '280 Claim 2 and '274 Claim 1 differ from the count generally with respect to anodization, the location of the second porous layer, or the details of separating, and also would have been obvious over the count in Applicants' view.

(4) **<u>Provide a claim chart comparing at least one claim of each party</u>**

Applicants have attached hereto as Exhibits A, B, and C the requisite claim charts showing interfering subject matter between Claims 77, 142, and 157 of the Subject Application and '213 Claim 1, '280 Claim 2, and '274 Claim 1, respectively.

(5) **<u>Provide detailed explanation why applicant will prevail on priority</u>**

Applicant will prevail on priority because Applicant is entitled to priority benefit of a number of applications that constitute constructive reductions to practice of the count and which predate the '213, '280, and '274 (Tayanaka) patents.

In more detail, the Tayanaka Patents claim the benefit of the following as their filing dates: (a) the '213 patent claims the benefit of Application No. 08/595,382, filed February 1, 1996; (b) the '213 and 245 patents claim the benefit of two Japanese patent applications filed March 18, 1996, and September 4, 1996; and (c) the '280 patent and the '274 patent each claims the benefit of the same Japanese applications claimed by the '245 and '213 patents, plus an additional Japanese patent application filed February 2, 1995 (Japanese Application No. 07-037655). Thus, the earliest filing dates from which any of the Tayanaka Patents claim benefit are February 2, 1995 (Japanese Application No. 07-037655) , and February 1, 1996 (U.S. Application No. 08/595,382). But both those applications are silent as to plural porous layers as required by the count, and therefore do not constitute constructive reductions to practice of the count. No priority benefit,

therefore, can be accorded to Tayanaka for those applications. The next earliest filing date claimed by Tayanaka is March 18, 1996.

In contrast, the Subject Application claims the benefit of the filing dates of a number of applications before that date, including US 08/401,237 filed March 9, 1995, JP 7-45441 filed March 6, 1995, JP 7-260100 filed October 6, 1995, JP 8-41709 filed February 28, 1996, and, with the earliest date of all, Japanese application No. JP 6-039389, filed March 10, 1994. And as explained below at page 6, each of those applications discloses at least one embodiment falling within the scope of the count, and constitutes a constructive reduction to practice of the count. Accordingly, Applicants have the earliest effective filing date, and should prevail for at least this reason.

(6) **Provide written description support charts**

Support in the instant application for the subject application's claims is presented in the tables attached hereto as follows: Claims 77 and 107 (Exhibit F), Claim 129 (Exhibit G), Claims 135, 136, 138, 139, and 142 (Exhibit H), and Claim 157 (Exhibit I).

Request for Benefit of the Filing Dates of Other Applications

37 C.F.R. § 41.202(a)(6) requires applicant to provide a chart for each constructive reduction to practice it wishes to be accorded, showing where each corresponding disclosure provides a constructive reduction to practice within the scope of the interfering subject matter. Applicants provide this information below.

The Subject Application is a continuation-in-part of three applications. The first of the three applications is Application No. 09/161,775, filed September 29, 1998, which is a divisional application of Application No. 08/863,717, filed May 27, 1997, which

in turn is a continuation of Application Serial No. 08/401,237, filed May 9, 1995. See 35 U.S.C. § 120. Applicants hereby respectfully request that they be accorded the benefit of the filing date of application Serial No. 08/401,237, as a constructive reduction to practice of the count. Attached as Exhibit K is a table showing that the count is fully supported by Application No. 09/161,775. Since Application Nos. 08/863,717 and 09/161,775 have specifications which are identical to the specification of Application No. 08/401,237, it is respectfully requested that priority benefit of the filing dates of those applications also be accorded.

The Subject Application is also a continuation-in-part of Application No. 09/734,667 filed December 13, 2000, which is a divisional application of Application No. 09/212,432 filed December 16, 1998, which in turn is a divisional application of Application No. 08/729,722 filed October 7, 1996. Applicants accordingly respectfully request that they be accorded priority benefit, with respect to the count, of the filing date of Application No. 08/729,722. Attached as Exhibit L is a table showing that the count is fully supported by that application. Since Application Nos. 09/212,432 and 09/734,667 have specifications which are identical to the specification of Application No. 08/729,722, it is respectfully requested that priority benefit of the filing dates of those applications also be accorded.

Still further, the Subject Application is additionally a continuation-in-part of Application No. 09/933,711 filed August 22, 2001, which is a divisional application of Application No. 09/840,895 filed April 25, 2001, which in turn is a divisional application of Application No. 08/807,604 filed February 27, 1997. Applicants accordingly respectfully request that they be accorded priority benefit, with respect to the count, the

filing date of application Serial No. 08/807,604. Attached as Exhibit M is a table showing that the count is supported by that application. Since Application Nos. 09/933,711 and 09/840,895 each has a specification which is identical to the specification of Application No. 08/807,604, it is respectfully requested that benefit be accorded for those applications' filing dates also.

Application Serial No. 08/401,237, from which the Subject Application claims priority, is based upon two Japanese patent applications, JP 6-039389, filed March 10, 1994, and JP 7-045441, filed March 6, 1995. Applicants hereby respectfully request that priority benefit with respect to the count of the filing dates of the applications be accorded. Attached as Exhibit N is a table showing that the count is fully supported by JP 6-039389, and attached as Exhibit O is a table showing that the count is supported by JP 7-045441.

In addition, Application No. 08/807,604, from which the Subject Application claims priority, is based upon Japanese application JP 8-0441709 filed February 28, 1996. Applicants hereby respectfully request that priority benefit with respect to the count of the filing dates of the applications be accorded. Attached as Exhibit Q is a table showing that the count is supported by JP 8-041709.

Furthermore, Application No. 08/729,722, from which this application claims priority, is based upon two Japanese applications, JP 7-260100 filed October 6, 1995 and JP 8-264386 filed October 4, 1996. Applicants hereby respectfully request that priority benefit with respect to the count of the filing dates of the applications be accorded. Attached as Exhibit P is a table showing that the count is supported by JP 7-260100, and attached as Exhibit R is a table showing that the count is supported by JP 8-264386.

SUMMARY

Applicants accordingly request institution of an interference as follows:

JUNIOR PARTIES

Named Inventor	:	Hiroshi Tayanaka
Patent	:	U.S. Patent No. 6,107,213, issued August 22, 2000, based upon U.S. Application No. 08/818,239, filed March 14, 1997
Title	:	Method for Making Thin Film Semiconductor
Assignee	:	Sony Corporation
Claims involved	:	1

Named Inventor	:	Hiroshi Tayanaka
Patent	:	U.S. Patent No. 6,326,280, issued December 4, 2001, based upon U.S. Application No. 09/616,395, filed July 14, 2000
Title	:	Method for Making Thin Film Semiconductor
Assignee	:	Sony Corporation
Claims involved	:	2

Named Inventor	:	Hiroshi Tayanaka
Patent	:	U.S. Patent No. 6,426,274, issued July 30, 2002, based upon U.S. Application No. 09/616,613, filed July 14, 2000
Title	:	Method for Making Thin Film Semiconductor
Assignee	:	Sony Corporation
Claims involved	:	1

SENIOR PARTY

Named Inventor	:	Kiyofuni Sakaguchi, Takao Yonehara, and Nobuhiko Sato
Application	:	U.S. Application No. 10/085,046, filed March 1, 2002
Title	:	Process for Production of Semiconductor Substrate
Assignee	:	Canon Kabushiki Kaisha
Accorded Benefit	:	(1) U.S. Application Serial No. 08/161,775, filed September 29, 1998;
		(2) U.S. Application Serial No. 08/863,717, filed May 27, 1997, now U.S. Patent No. 5,856,229;
		(3) U.S. Application Serial No. 08/401,237, filed March 9, 1995, abandoned;
		(4) U.S. Application Serial No. 09/734,667, filed December 13, 2000, abandoned;
		(5) U.S. Application Serial No. 09/212,432, filed December 16, 1998, now U.S. Patent No. 6,246,068;
		(6) U.S. Application Serial No. 08/729,722, filed October 7, 1996, now U.S. Patent No. 5,854,123;
		(7) U.S. Application Serial No. 09/933,711, filed August 22, 2001, abandoned;
		(8) U.S. Application No. 09/840,895 filed April 25, 2001;
		(9) U.S. Application Serial No. 08/807,604, filed February 27, 1997, now U.S. Patent No. 6,294,478;
		(10) JP 6-039389, filed March 10, 1994;

(11) JP 7-045441, filed March 6, 1995;

(12) JP 7-260100, filed October 6, 1995;

(13) JP 8-041709, filed February 28, 1996;

(14) JP 8-264386, fled October 4, 1996.

COUNT

Claim 77 of the Subject Application.

CLAIMS

The claims of the parties are:

Tayanaka U.S. Patent No. 6,107,213	1-29
Tayanaka U.S. Patent No. 6,326,280	1-3
Tayanaka U.S. Patent No. 6,426,274	1-15, 17, 18
Sakaguchi, et al. Application No. 10/085,046	77, 107, 129, 135-136, 138-139, 142 and 157

The claims of the parties that correspond to the count are:

Tayanaka U.S. Patent No. 6,107,213	1
Tayanaka U.S. Patent No. 6,326,280	2
Tayanaka U.S. Patent No. 6,426,274	1

CONCLUSION

In light of the foregoing, Applicants respectfully request institution of an interference as set forth herein.

Respectfully submitted,

Robert H. Fischer
Attorney for Applicants
Registration No. 30,051

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3800
Facsimile (212) 218-2200

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EXHIBIT A

Chart comparing Subject Application Claim 77 and '213 Claim 1

In the below chart, the differences between the claims are identified by underlining in each of the claims:

Subject Application Claim 77	'213 Claim 1
A method for making a thin film semi-conductor comprising the steps of:	A method for making a thin film semi-conductor comprising the steps of:
providing a semi-conductor substrate having a surface;	providing a semi-conductor substrate having a surface;
forming a first porous layer adjacent said surface having a first porosity;	anodizing the semi-conductor substrate to provide a first porous layer adjacent the surface having a first porosity;
forming a second porous layer having a second porosity greater than said first porosity;	anodizing the semi-conductor substrate to provide at least one second porous layer adjacent the first porous layer opposite the surface, each said second porous layer having a second porosity greater than said first porosity;
forming a semi-conductor film on said surface; and	forming a semi-conductor film on the first porous layer; and

separating the semi-conductor film from said semi-conductor substrate.	separating the semi-conductor film from the semi-conductor substrate <u>along a line of relative weakness defined in or adjacent one of said second porous layers</u>.

The differences between these two claims in no way amount to patentable distinctions. '213 patent claim 1 requires anodizing and specifies that the separating takes place along a line of relative weakness, but these features are conventional or inherent, as acknowledged in the Official Action. Accordingly, Subject Application claim 77 and '213 patent claim 1 are each obvious in view of the other. They therefore interfere.

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EXHIBIT B

Chart comparing Subject Application Claim 142 and '280 Claim 2

In the below chart, the differences between the claims are identified by underlining in each of the claims:

Subject Application Claim 142	'280 Claim 2
A thin film semi-conductor formed by:	A thin film semi-conductor formed by:
providing a semi-conductor substrate having a surface;	providing a semi-conductor substrate having a surface;
forming a first porous layer adjacent said surface having a first porosity;	forming a first porous layer having a first porosity <u>on a surface of said substrate</u>;
forming a second porous layer within said first porous layer having a second porosity higher than said first porosity;	forming a second porous layer within <u>or underneath</u> said first porous layer having a second porosity higher than said first porosity;
forming at least one semi-conductor film on said surface; and	forming at least one semi-conductor thin film on said surface; and
separating said semi-conductor film from said semi-conductor substrate along a line of relative weakness defined in or adjacent one of said first and second porous layers.	separating said semi-conductor film from said substrate along a line of relative weakness defined in or adjacent one of said first and second porous layers <u>to obtain said thin film semi-conductor, wherein said first porous layer and said second porous layer are formed by anodizing</u>.

The main difference is that '280 Claim 2 requires anodizing, which was conventional as noted at page 2 of the Official Action, and thus the claims interfere.

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EXHIBIT C

Chart comparing Subject Application Claim 157 and '274 Claim 1

In the below chart, the differences between the claims are identified by underlining in each of the claims:

Subject Application Claim 157	'274 Claim 1
A method for making a thin film semi-conductor comprising the steps of:	A method for making a thin film semi-conductor comprising the steps of:
providing a semi-conductor substrate having a surface;	providing a semi-conductor substrate having a surface;
forming a first porous layer adjacent said surface having a first porosity;	<u>anodizing</u> the semi-conductor substrate to provide a first porous layer adjacent the surface having a first porosity;
forming a second porous layer <u>within</u> said first porous layer having a second porosity higher than said first porosity; and	<u>anodizing</u> the semi-conductor substrate to provide <u>at least one</u> second porous layer <u>adjacent</u> the first porous layer opposite the surface, <u>each</u> said second porous layer having a second porosity greater than said first porosity; and
separating an upper portion of said semi-conductor substrate from said semi-conductor substrate along a line of relative weakness defined in or adjacent said second porous layer.	separating an upper portion of the semi-conductor substrate from the semi-conductor substrate along a line of relative weakness defined in or adjacent one of said second porous layers

The main differences are that '274 Claim 1 requires anodizing, which was conventional as noted at page 2 of the Official Action, and that Claim 157 requires formation of the second porous layer --within--, which in the present case does not constitute a patentable distinction.

EXHIBIT F	
CLAIM	**Support In Specification Of Application No. 10/085,046**
CLAIM 77 A method for making a thin film semi-conductor comprising the steps of:	Paragraphs 0266 to 0273 describe a process of preparing a semiconductor substrate of high quality, as referred to in paragraph 0274, and paragraph 0273 states that a monocrystalline Si layer was formed in a thickness of 1 μm (a thin film). (Example 6) See also, e.g., paragraphs 0312 to 0317, which describe a process of preparing a semiconductor substrate, and paragraph 0317 which states that a monocrystalline Si layer was formed in a thickness of 1 μm (a thin film). (Example 11) See further, e.g., paragraphs 0405 to 0416 (Embodiment 11), 0321 to 0326 (Example 12), paragraph 0169 and 0660 (Example 30).
providing a semi-conductor substrate having a surface;	Paragraph 0169 states that "[t]he process for producing a semiconductor substrate of the present invention is described by employing a silicon substrate as an example."

CLAIM	**Support In Specification Of Application No. 10/085,046**
	Also, in the description of Example 6, paragraph 0266 refers to "A first monocrystalline (100) Si substrate of P-type or N-type . . . ." See also, e.g., in the description of Example 11, paragraph 0312, which refers to "A first monocrystalline (100) Si substrate of P-type or N-type . . . ." Each substrate has a surface. See further, e.g., paragraphs 0321 (Example 12), 0406 (Embodiment 11), and 0660 (Example 30).
forming a first porous layer adjacent said surface having a first porosity;	Paragraph 0266 states that the "first monocrystalline (100) Si substrate . . . was anodized . . . under the anodization conditions below: Current density: $7mA.cm^{-2}$ Anodization solution: $HF:H_2O:C_2H_5OH$ = 1:1:1 Time: 4 minutes Thickness of porous Si: 3 μm Porosity: 15 %" (Example 6)

CLAIM	Support In Specification Of Application No. 10/085,046
	See also, e.g., Paragraph 0312 which states that the "first monocrystalline (100) Si substrate . . . was anodized . . . under the anodization conditions below: Current density: $7mA.cm^{-2}$ Anodization solution: $HF:H_2O:C_2H_5OH = 1:1:1$ Time: 4 minutes Thickness of porous Si: 3 µm Porosity: 15 %" (Example 11) The anodization described in each of these paragraphs forms a first porous layer adjacent the surface. See further, e.g., paragraphs 0321 (Example 12), 0406 (Embodiment 11), and 0660 (Example 30).
forming a second porous layer having a second porosity higher than said first porosity;	After anodizing at $7mA.cm^{-2}$, paragraph 0267 states that "The anodization was conducted further under the conditions below: Current density: $30mA.cm^{-2}$ Anodization solution: $HF:H_2O:C_2H_5OH = 1:3:2$ Time: 3 minutes Thickness of porous Si: 10 µm Porosity: 45 %" (Example 6)

CLAIM	Support In Specification Of Application No. 10/085,046
	See also, e.g., paragraph 0313 which states that "The anodization was conducted further under the conditions below: Current density: $30mA.cm^{-2}$ Anodization solution: $HF:H_2O:C_2H_5OH = 1:3:2$ Time: 3 minutes Thickness of porous Si: 10 μm Porosity: 45 %" (Example 11) The anodization described in each of these paragraphs forms a second porous layer. See further, e.g., paragraphs 0322 (Example 12) and 0661 (Example 30). See as well, e.g., paragraph 0411 which refers to forming a layer with large porosity in a porous Si layer 101 through ion implantation, and paragraph 0415 which states that "The layer having the large porosity can be formed by altering current in the anodization, besides the ion implantation." See also paragraph 0407. (Embodiment 11)
forming a semi-conductor film on said surface; and	In Example 6, paragraph 0268 states that "On the porous Si formed on the substrate, monocrystalline Si was allowed to grow epitaxially ...."

CLAIM	**Support In Specification Of Application No. 10/085,046**
	See also, e.g., paragraph 0314 which states "On the porous Si formed on the substrate, monocrystalline Si was allowed to grow epitaxially...." (Example 11) The "porous Si" is adjacent (and defines) the surface and within the substrate, and the silicon layer is formed on that surface. See further, e.g., paragraphs 0323 (Example 12), 0408 (Embodiment 11), and 0663 (Example 30).
separating said semi-conductor film from said semi-conductor substrate.	Paragraph 0271 states that "A sufficient pulling force was applied to the resulting bonding wafer in the direction perpendicular to the bonded wafer face . . . [,t]hereby, the porous Si layer was broken to allow the wafer to separate into two sheets with the porous Si layers exposed." (Example 6) See also, e.g., paragraph 0316 which states "The porous Si layer was etched selectively with an . . . etching solution. Thereby the porous Si was etched selectively and removed completely [to thereby achieve the separation]." (Example 11)

CLAIM	**Support In Specification Of Application No. 10/085,046**
	The steps described in paragraphs 0271 and 0316 each separate the monocrystalline Si from the substrate. See further, e.g., 0326 (Example 12), 0415 (Embodiment 11), and 0666 (Example 30). See also, e.g., Embodiments 9, 10, and 14, and Examples 17-22, 25, 26, 29, 32, 35, and 37.
CLAIM 107 A method for making a thin film semi-conductor comprising the steps of:	Paragraphs 0405 to 0416 describe a process of preparing a semiconductor substrate, and paragraph 0371 refers in general to forming a thin film in accordance with the invention. Paragraph 0409 also refers to a "thin film" in the context of Embodiment 11. See also, e.g., the description of Example 30, beginning at paragraph 0660.

CLAIM	Support In Specification Of Application No. 10/085,046
providing a semi-conductor substrate having a surface;	Paragraph 0406 refers to "a single-crystal Si substrate 100 . . . anodized . . . [, and] one surface layer of the substrate." Also, paragraph 0407 states that "as the substrate, a p-type single-crystal silicon substrate 600 is prepared." Also, e.g., in the description of an Example 30, paragraph 0660 states "Prepared was a p-type or n-type 6-inch diameter first (100) single-crystal Si substrate having the thickness of 625 μm . . . ."
forming a first porous layer adjacent said surface having a first porosity;	Paragraph 0406 states "First, a single-crystal Si substrate 100 is anodized to form a porous Si layer 101." See also, e.g., paragraph 0660 which states that the "Prepared . . . first (100) single-crystal Si substrate . . . was subjected to anodization in HF solution. The conditions for the anodization were as follows: Current density: 7 (mA•cm^{-2}) Anodization solution: HF:H_2O:C_2H_5OH = 1:1:1 Time: 3 (min) Thickness of porous Si: 3 (μm) Porosity: 15(%)"

CLAIM	Support In Specification Of Application No. 10/085,046
forming a second porous layer within said first porous layer having a second porosity higher than said first porosity;	Each of these individual anodizations forms a first porous layer adjacent the substrate surface. Paragraph 0411 states that "ion implantation is performed to form a layer with large porosity in the porous Si layer 101", and Paragraph 0415 states "The layer having the large porosity can be formed by altering current in the anodization, besides the ion implantation." The anodization forms a second porous layer within the first porous layer. See also, e.g., the following paragraphs: Paragraph 0661 states: "Further, Current density: 30 ($mA \cdot cm^{-2}$) Anodization solution: $HF:H_2O:C_2H_5OH$ = 1:1:1 Time: 3 (min) Thickness of porous Si: 10 (μm) Porosity: 45 (%)"

CLAIM	**Support In Specification Of Application No. 10/085,046**
	Paragraph 0662 states: "Further Current density: 7 ($mA \cdot cm^{-2}$) Anodization solution: $HF:H_2O:C_2H_5OH = 1:1:1$ Time: 3 (min) Thickness of porous Si: 3 (μm) Porosity: 15(%)" The anodizations described in these two paragraphs also form a second porous layer within a first porous layer, especially since the anodizations described in paragraphs 0660 and 0662 each result in substantially a same, first porosity being provided.
forming at least one semi-conductor film on said surface; and	Paragraph 0408 states that "On the porous layer 101 thus formed, a non-porous single-crystal silicon layer 102 is epitaxially grown . . . ." See also, e.g., paragraph 0663 which states that "Single-crystal Si was epitaxially grown . . . on porous Si . . . ." The "porous layer 101" or "porous Si" is adjacent (and defines) the surface, and the non-porous single-crystal silicon layer thus is formed on that surface.

CLAIM	Support In Specification Of Application No. 10/085,046
separating said semi-conductor film from said semi-conductor substrate.	Paragraph 0412 states "The substrate 100 having the foregoing epitaxial surface with the oxidized surface and a support substrate 110 . . . are prepared", and paragraph 0415 states "the substrates are separated into two at the porous Si layer having the large porosity." See also, e.g., paragraph 0666 which states that "The bonding wafer was . . . divided perfectly in the porous Si layer into two substrates...." The steps in these paragraphs cause a separation of the monocrystalline Si from the substrate. See also, e.g., Embodiments 9 and 10, and Examples 17-22, 25, and 26. See further, e.g., Embodiment 14 and Examples 29, 32, 35, and 37.

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EXHIBIT G	
CLAIM	**Support in Specification of Application No. 10/085,046**
CLAIM 129 A method for making a semiconductor film comprising the steps of:	Paragraphs 0405 to 0416 describe a process of preparing a semiconductor substrate, and paragraph 0371 refers in general to forming a thin film in accordance with the invention. Paragraph 0409 also refers to a "thin film" in the context of Embodiment 11. See also, e.g., the description of an Example 30, beginning at paragraph 0660.
providing a semiconductor substrate having a surface;	Paragraph 0406 refers to "a single-crystal Si substrate 100 . . . [, and] one surface layer of the substrate." Also, paragraph 0407 states that "as the substrate, a p-type single-crystal silicon substrate 600 is prepared." Also, e.g., in the description of Example 30, paragraph 0660 states "Prepared was a p-type or n-type 6-inch diameter first (100) single-crystal Si substrate having the thickness of 625 μm...."

CLAIM	Support in Specification of Application No. 10/085,046
forming a porous layer adjacent said surface, the porous layer comprises a first porous layer having a first porosity and a second porous layer having a second porosity higher than said first porosity and a third porous layer having a third porosity different from said second porosity;	Paragraph 0406 states that "First, a single-crystal Si substrate 100 is anodized to form a porous Si layer 101." Paragraph 0411 states that "ion implantation is performed to form a layer with large porosity in the porous Si layer 101", and Paragraph 0415 states that "The layer having the large porosity can be formed by altering current in the anodization, besides the ion implantation." Also, paragraph 0407 states that "In general, as the current value increases, the anodization speed increases and the density of the porous Si layer decreases. That is, the volume of the pores increases." The above anodizations form a porous layer adjacent the substrate surface. The anodizing of the substrate 100 forms a first porous layer, and the large porosity layer is a second porous layer which, when formed within the porous Si layer 101, results in a third porous layer (part of the Si layer) being formed.

CLAIM	Support in Specification of Application No. 10/085,046
	See also, e.g., the following paragraphs: Paragraph 0660 states that the "Prepared . . . first (100) single-crystal Si substrate . . . was subjected to anodization in HF solution. The conditions for the anodization were as follows: Current density: 7 ($mA \cdot cm^{-2}$) Anodization solution: $HF:H_2O:C_2H_5OH = 1:1:1$ Time: 3 (min) Thickness of porous Si: 3 (μm) Porosity: 15(%)" This anodization forms a first porous layer. Paragraph 0661 states: "Further, Current density: 30 ($mA \cdot cm^{-2}$) Anodization solution: $HF:H_2O:C_2H_5OH = 1:1:1$ Time: 3 (min) Thickness of porous Si: 10 (μm) Porosity: 45 (%)" The anodization described in paragraph 0661 forms a second porous layer.

CLAIM	Support in Specification of Application No. 10/085,046
	Paragraph 0662 states: "Further, Current density: 7 ($mA \cdot cm^{-2}$) Anodization solution: $HF:H_2O:C_2H_5OH = 1:1:1$ Time: 3 (min) Thickness of porous Si: 3 (μm) Porosity: 15(%)" The anodization described in paragraph 0662 forms a third porous layer.
forming at least one semiconductor film on said surface; and	Paragraph 0408 states that "On the porous layer 101 thus formed, a non-porous single-crystal silicon layer 102 is epitaxially grown . . . ." See also, e.g., paragraph 0663 which states that "Single-crystal Si was epitaxially grown . . . on porous Si . . . ." The "porous layer 101" or "porous Si" is adjacent the surface, and the silicon layer is formed on that surface.
separating semiconductor film from said semiconductor substrate.	Paragraph 0415 states that "the substrates are separated into two at the porous Si layer having the large porosity."

CLAIM	Support in Specification of Application No. 10/085,046
	See also, e.g., paragraph 0666 which states that "The bonding wafer was . . . divided perfectly in the porous Si layer into two substrates after one hour." The steps described in these paragraphs each separate the single-crystal silicon layer from the substrate. See further, e.g., Embodiments 9, 10, and 14, and Examples 17-22, 25, 26, 29, 32, 35, and 37.

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EXHIBIT H	
CLAIM	**Support in Specification of Application No. 10/085,046**
CLAIM 135	
A method for making a thin film semi-conductor comprising the steps of:	Paragraphs 0266 to 0273 describe a process of preparing a semiconductor substrate of high quality, as referred to in paragraph 0274, and paragraph 0273 states that a monocrystalline Si layer was formed in a thickness of 1 μm (a thin film). See also, e.g., paragraphs 0312 to 0317 which describe a process of preparing a semiconductor substrate, and paragraph 0317 which states that a monocrystalline Si layer was formed in a thickness of 1 μm (a thin film). See further, e.g., paragraphs 0321 to 0326, paragraph 0328, paragraphs 0405 to 0416, 0371, 0409, and the description of an Example 30, beginning at paragraph 0660.

CLAIM	Support in Specification of Application No. 10/085,046
forming a first porous layer having a first porosity on a surface of a substrate;	Paragraph 0266 states that the "first monocrystalline (100) Si substrate . . . was anodized in an HF solution under the anodization conditions below: Current density: 7mA.cm^{-2} Anodization solution: $HF:H_2O:C_2H_5OH = 1:1:1$ Time: 4 minutes Thickness of porous Si: 3 μm Porosity: 15 %"
	See also, e.g., paragraph 0312 which states that the "first monocrystalline (100) Si substrate . . . was anodized . . . under the anodization conditions below: Current density: 7mA.cm^{-2} Anodization solution: $HF:H_2O:C_2H_5OH = 1:1:1$ Time: 4 minutes Thickness of porous Si: 3 μm Porosity: 15 %"

CLAIM	Support in Specification of Application No. 10/085,046
	The anodization described in each of the foregoing paragraphs forms a first porous layer on a surface of the substrate (in a manner such that the surface becomes defined by the first porous layer). See further, e.g., paragraphs 0321, 0406, and 0660.
forming a second porous layer having a second porosity higher than said first porosity;	Paragraph 0267 states that "The anodization was conducted further under the conditions below: Current density: $30mA.cm^{-2}$ Anodization solution: $HF:H_2O:C_2H_5OH = 1:3:2$ Time: 3 minutes Thickness of porous Si: 10 μm Porosity: 45 %" See also, e.g., paragraph 0313 which states that "The anodization was conducted further under the conditions below: Current density: $30mA.cm^{-2}$ Anodization solution: $HF:H_2O:C_2H_5OH = 1:3:2$ Time: 3 minutes Thickness of porous Si: 10 μm Porosity: 45 %"

CLAIM	**Support in Specification of Application No. 10/085,046**
	The anodization described each of the two foregoing paragraphs forms a second porous layer. See further, e.g., paragraph 0322, 0411, 0415, and 0661.
forming at least one semi-conductor thin film on said surface; and	Paragraph 0268 states that "On the porous Si formed on the substrate, monocrystalline Si was allowed to grow epitaxially . . . ."
	As pointed out above, the substrate surface is defined by the first porous layer (on which the silicon is formed). See also, e.g., paragraphs 0314, 0323, 0408, and 0663.
separating said semi-conductor film from said substrate along a line of relative weakness defined in or adjacent one of said first and second porous layers,	Paragraph 0271 states that "A sufficient pulling force was applied to the resulting bonding wafer in the direction perpendicular to the bonded wafer face . . . [,t]hereby, the porous Si layer was broken to allow the wafer to separate into two sheets with the porous Si layers exposed."

CLAIM	**Support in Specification of Application No. 10/085,046**
	Paragraph 0118 states that "the present invention permits the internal pressure to be exerted only on the porous Si layer by utilizing oxidation . . . , excellent in uniformity, and by combining high-speed oxidizability of porous Si, volume expansion of porous Si, and fragility of porous Si, whereby the wafer can be split with good controllability in and through the porous Si layer." Also, paragraph 0170 states that "on application of a tensile force, a compressive force, or a shearing force to a laminated wafer, the porous layer will be broken first. The larger the porosity of the porous layer, the less force is needed for the breakdown of the layer." See also, e.g., paragraphs 0316, 0326, 0415, 0170, and 0666. The separation occurs wherever there is a line of greatest relative weakness, whether within or adjacent one of the first and second porous layers, just as in Application No. 10/085,046.

CLAIM	Support in Specification of Application No. 10/085,046
wherein said first porous layer and said second porous layer are formed by anodizing.	Paragraphs 0266 and 0267 describe performing anodization, which results in the forming of the first and second porous layers, as shown above.
	Also, e.g., paragraphs 0312 and 0313 describe performing anodization, which results in the forming of the first and second porous layers, as shown above. See also, e.g., paragraphs 0321, 0322, 0406 and 0415, and paragraphs 0660 to 0662.
CLAIM 136 A method for making a thin film semi-conductor comprising the steps of:	Paragraphs 0405 to 0416 describe a process of preparing a semiconductor substrate, and paragraph 0371 refers in general to forming a thin film in accordance with the invention. Paragraph 0409 also refers to a "thin film" in the context of Embodiment 11. Also, e.g., see the description of Example 30, beginning at paragraph 0660.
forming a first porous layer having a first porosity on a surface of a substrate;	Paragraph 0406 states that "First, a single-crystal Si substrate 100 is anodized to form a porous Si layer 101."

CLAIM	**Support in Specification of Application No. 10/085,046**
	See also, e.g., paragraph 0660 which states that the "Prepared . . . first (100) single-crystal Si substrate . . . was subjected to anodization in HF solution. The conditions for the anodization were as follows: Current density: 7 ($mA \cdot cm^{-2}$) Anodization solution: $HF:H_2O:C_2H_5OH = 1:1:1$ Time: 3 (min) Thickness of porous Si: 3 (μm) Porosity: 15(%)" The anodizing described in each of these paragraphs forms a first porous layer on a surface of the substrate (in a manner such that the surface becomes defined by the first porous layer).

CLAIM	Support in Specification of Application No. 10/085,046
forming a second porous layer within or underneath said first porous layer having a second porosity higher than said first porosity;	Paragraph 0411 states that "ion implantation is performed to form a layer with large porosity in the porous Si layer 101". Paragraph 0415 states that "The layer having the large porosity can be formed by altering current in the anodization, besides ion implantation." Also, paragraph 0407 states that "In general, as the current value increases, the anodization speed increases and the density of the porous Si layer decreases. That is, the volume of the pores increases."
	See also, e.g., paragraph 0661 which states: "Further, Current density: 30 ($mA \cdot cm^{-2}$) Anodization solution: $HF:H_2O:C_2H_5OH$ = 1:1:1 Time: 3 (min) Thickness of porous Si: 10 (μm) Porosity: 45 (%)"

CLAIM	Support in Specification of Application No. 10/085,046
	Paragraph 0662 states: "Further, Current density: 7 ($mA \cdot cm^{-2}$) Anodization solution: $HF:H_2O:C_2H_5OH = 1:1:1$ Time: 3 (min) Thickness of porous Si: 3 (μm) Porosity: 15(%)" The anodization described in paragraph 0415, and the anodizations described in paragraphs 0661 and 0662, form a second porous layer within (0415, 0661, and 0662) or underneath (0415 and 0661) at least a portion of the first porous layer.
forming at least one semi-conductor thin film on said surface; and	Paragraph 0408 states that "On the porous layer 101 thus formed, a non-porous single-crystal silicon layer 102 is epitaxially grown . . . ." See also, e.g., paragraph 0663 which states that "Single-crystal Si was epitaxially grown . . . on porous Si . . . ." As pointed out above, the substrate surface is defined by the first porous layer (on which the silicon layer is formed).

CLAIM	Support in Specification of Application No. 10/085,046
separating said semiconductor film from said substrate along a line of relative weakness defined in or adjacent one of said first and second porous layers.	Paragraph 0415 states that "the substrates are separated into two at the porous Si layer having the large porosity."
	See also, e.g., paragraph 0666 which states that "The bonding wafer was . . . divided perfectly in the porous Si layer into two substrates after one hour. The portion with the higher porosity was structurally fragile, so that division started from that fragile portion." See also, e.g., paragraph 0118.
	The separation occurs wherever there is a line of greatest relative weakness, whether within or adjacent one of the first and second porous layers, just as in Application No. 10/085,046. See further, e.g., Embodiments 9, 10, and 14 and Examples 17-22, 25, 26, 29, 32, 35, and 37.

CLAIM	Support in Specification of Application No. 10/085,046
CLAIM 138	
A thin film semi-conductor formed by:	Paragraphs 0266 to 0273 describe a process of preparing a semiconductor substrate of high quality, as referred to in paragraph 0274, and paragraph 0273 states that a monocrystalline Si layer was formed in a thickness of 1 μm (a thin film). See also, e.g., paragraphs 0312 to 0317 which describe a process of preparing a semiconductor substrate, and paragraph 0317 states that a monocrystalline Si layer was formed in a thickness of 1 μm (a thin film). See further, e.g., paragraphs 0321 to 0326 and 0328, paragraphs 0405 to 0416, 0371, and 0409, as well as paragraph 0169 and the description of Example 30, beginning at paragraph 0660.
providing a semi-conductor substrate having a surface;	Paragraph 0169 states that "[t]he process for producing a semiconductor substrate of the present invention is described by employing a silicon substrate as an example."

CLAIM	Support in Specification of Application No. 10/085,046
	Also, in the description of an Example 6, paragraph 0266 refers to "A first monocrystalline (100) Si substrate of P-type or N-type . . . ." The substrate in each case has a surface. See also, e.g., paragraph 0169, paragraph 0312 (Embodiment 11), paragraph 0321 (Example 12), paragraphs 0406 and 0407 (Embodiment 11), and paragraph 0660 (Example 30).
forming a first porous layer having a first porosity on a surface of said substrate;	Paragraph 0266 states that the "first monocrystalline (100) Si substrate . . . was anodized in an HF solution under the anodization conditions below: Current density: 7mA.cm^{-2} Anodization solution: $HF:H_2O:C_2H_5OH$ = 1:1:1 Time: 4 minutes Thickness of porous Si: 3 µm Porosity: 15 %"

CLAIM	Support in Specification of Application No. 10/085,046
	See also, e.g., paragraph 0312 states that the "first monocrystalline (100) Si substrate . . . was anodized . . . under the anodization conditions below: Current density: 7mA.cm^{-2} Anodization solution: $HF:H_2O:C_2H_5OH = 1:1:1$ Time: 4 minutes Thickness of porous Si: 3 μm Porosity: 15 %" The anodizing described in each of these paragraphs forms a first porous layer on the surface of the substrate (in a manner such that the surface becomes defined by the first porous layer). See further, e.g., paragraphs 0321, 0406, and 0660.

CLAIM	**Support in Specification of Application No. 10/085,046**
forming a second porous layer having a second porosity higher than said first porosity;	Paragraph 0267 states that "The anodization was conducted further under the conditions below: Current density: 30mA.cm^{-2} Anodization solution: $HF:H_2O:C_2H_5OH$ = 1:3:2 Time: 3 minutes Thickness of porous Si: 10 μm Porosity: 45 %" See also, e.g., paragraph 0313 which states that "The anodization was conducted further under the conditions below: Current density: 30mA.cm^{-2} Anodization solution: $HF:H_2O:C_2H_5OH$ = 1:3:2 Time: 3 minutes Thickness of porous Si: 10 μm Porosity: 45 %"
	The anodization described each of the two foregoing paragraphs forms a second porous layer. See also, paragraphs 0322, 0411 and 0415, and 0661.

CLAIM	Support in Specification of Application No. 10/085,046
forming at least one semi-conductor thin film on said surface; and	Paragraph 0268 states that "On the porous Si formed on the substrate, monocrystalline Si was allowed to grow epitaxially . . . ."
	See also, e.g., paragraph 0314 which states that "On the porous Si formed on the substrate, monocrystalline Si was allowed to grow epitaxially . . . ." As pointed out above, the surface is defined by the first porous layer (on which the silicon layer is formed). See further, e.g., paragraphs 0323, 0408, and 0663.
separating said semi-conductor film from said substrate along a line of relative weakness defined in or adjacent one of said first and second porous layers to obtain said thin film semi-conductor,	Paragraph 0271 states that "A sufficient pulling force was applied to the resulting bonding wafer in the direction perpendicular to the bonded wafer face . . . [,t]hereby, the porous Si layer was broken to allow the wafer to separate into two sheets with the porous Si layers exposed."

CLAIM	**Support in Specification of Application No. 10/085,046**
	See also, e.g., paragraph 0316 which states that "The porous Si layer was etched selectively with an . . . etching solution. Thereby the porous Si was etched selectively and removed completely." See also, e.g., paragraphs 0118 and 0170. The separation occurs wherever there is a line of greatest relative weakness, whether within or adjacent one of the first and second porous layers, just as in Application No. 10/085,046. See also, e.g., paragraphs 0326, 0415, and 0666.
wherein said first porous layer and said second porous layer are formed by anodizing.	Paragraphs 0266 and 0267 describe performing anodization, which results in the first and second porous layers being formed, as shown above.
	See also, e.g., paragraphs 0312 and 0313 which describe performing anodization, which results in the first and second porous layers being formed, as shown above. See further, e.g., paragraphs 0321 and 0322, paragraphs 0406 and 0415, and paragraphs 0660 and 0661.

CLAIM	Support in Specification of Application No. 10/085,046
CLAIM 139	
A thin film semi-conductor formed by:	Paragraphs 0405 to 0416 describe a process of preparing a semiconductor substrate, and paragraph 0371 refers in general to forming a thin film in accordance with the invention. Paragraph 0409 also refers to a "thin film" in the context of Embodiment 11. Also, e.g., see the description of Example 30, beginning at paragraph 0660.
providing a semi-conductor substrate having a surface;	Paragraph 0406 refers to "a single-crystal Si substrate 100 . . . [, and] one surface layer of the substrate." Also, paragraph 0407 states that "as the substrate, a p-type single-crystal silicon substrate 600 is prepared." See also, e.g., paragraph 0660.
forming a first porous layer having a first porosity on a surface of said substrate;	Paragraph 0406 states that "First, a single-crystal Si substrate 100 is anodized to form a porous Si layer 101.

CLAIM	**Support in Specification of Application No. 10/085,046**
	See also, e.g., paragraph 0660 which states that the "Prepared . . . first (100) single-crystal Si substrate . . . was subjected to anodization in HF solution. The conditions for the anodization were as follows: Current density: 7 ($mA \cdot cm^{-2}$) Anodization solution: $HF:H_2O:C_2H_5OH = 1:1:1$ Time: 3 (min) Thickness of porous Si: 3 (μm) Porosity: 15(%)"
	The anodizing described in each of these paragraphs forms a first porous layer on a surface of the substrate (in a manner such that the surface becomes defined by the first porous layer).

CLAIM	Support in Specification of Application No. 10/085,046
forming a second porous layer within or underneath said first porous layer having a second porosity higher than said first porosity;	Paragraph 0411 states that "ion implantation is performed to form a layer with large porosity in the porous Si layer 101". Paragraph 0415 states that "The layer having the large porosity can be formed by altering current in the anodization, besides ion implantation." Also, paragraph 0407 states that "In general, as the current value increases, the anodization speed increases and the density of the porous Si layer decreases. That is, the volume of the pores increases." Also, e.g., paragraph 0661 states: "Further, Current density: 30 ($mA \cdot cm^{-2}$) Anodization solution: $HF:H_2O:C_2H_5OH$ = 1:1:1 Time: 3 (min) Thickness of porous Si: 10 (μm) Porosity: 45 (%)" Paragraph 0662 states: "Further, Current density: 7 ($mA \cdot cm^{-2}$) Anodization solution: $HF:H_2O:C_2H_5OH$ = 1:1:1 Time: 3 (min) Thickness of porous Si: 3 (μm) Porosity: 15(%)"

CLAIM	Support in Specification of Application No. 10/085,046
	The anodization described in paragraph 0415, and the anodizations of paragraphs 0661 and 0662 form a second porous layer within (0415, 0661, and 0662) or underneath (0415 and 0661) at least a portion of the first porous layer.
forming at least one semi-conductor thin film on said surface; and	Paragraph 0408 states that "On the porous layer 101 thus formed, a non-porous single-crystal silicon layer 102 is epitaxially grown . . . ." Also, e.g., paragraph 0663 states that "Single-crystal Si was epitaxially grown . . . on porous Si . . . ."
	As pointed out above, the surface is defined by the first porous layer (on which the silicon layer is formed).
separating said semi-conductor film from said substrate along a line of relative weakness defined in or adjacent one of said first and second porous layers to obtain said thin film semiconductor.	Paragraph 0415 states that "the substrates are separated into two at the porous Si layer having the large porosity."

CLAIM	Support in Specification of Application No. 10/085,046
	Also, e.g., see paragraph 0666 which states that "The bonding wafer was . . . divided perfectly in the porous Si layer into two substrates after one hour. The portion with the higher porosity was structurally fragile, so that division started from that fragile portion." See also, e.g., paragraph 0118. The separation occurs wherever there is a line of greatest relative weakness, whether within or adjacent one of the first and second porous layers.
CLAIM 142 A thin film semi-conductor formed by:	Paragraphs 0405 to 0416 describe a process of preparing a semiconductor substrate, and paragraph 0371 refers in general to forming a thin film in accordance with the invention. Paragraph 0409 also refers to a "thin film" in the context of Embodiment 11. See also, e.g., the description of Example 30, beginning at paragraph 0660.

CLAIM	Support in Specification of Application No. 10/085,046
providing a semi-conductor substrate having a surface;	Paragraph 0406 refers to "a single-crystal Si substrate 100 . . . anodized . . . [, and] one surface layer of the substrate." Also, paragraph 0407 states that "as the substrate, a p-type single-crystal silicon substrate 600 is prepared." Also, e.g., in the description of an Example 30, paragraph 0660 states "Prepared was a p-type or n-type 6-inch diameter first (100) single-crystal Si substrate having the thickness of 625 μm of P-type or N-type . . . ."
forming a first porous layer adjacent said surface having a first porosity;	Paragraph 0406 states that "First, a single-crystal Si substrate 100 is anodized to form a porous Si layer 101." See also, e.g., paragraph 0660 which states that the "Prepared . . . first (100) single-crystal Si substrate . . . was subjected to anodization in HF solution. The conditions for the anodization were as follows: Current density: 7 ($mA \cdot cm^{-2}$) Anodization solution: $HF:H_2O:C_2H_5OH = 1:1:1$ Time: 3 (min) Thickness of porous Si: 3 (μm) Porosity: 15(%)"

CLAIM	**Support in Specification of Application No. 10/085,046**
	The anodization described in each of the foregoing paragraphs forms a first porous layer adjacent the surface of the substrate.
forming a second porous layer within said first porous layer having a second porosity higher than said first porosity;	Paragraph 0411 states that "ion implantation is performed to form a layer with large porosity in the porous Si layer 101." See also, paragraph 0661 which states: "Further, Current density: 30 (mA•cm^{-2}) Anodization solution: HF:H_2O:C_2H_5OH = 1:1:1 Time: 3 (min) Thickness of porous Si: 10 (μm) Porosity: 45 (%)" In addition, paragraph 0662 states: "Further, Current density: 7 (mA•cm^{-2}) Anodization solution: HF:H_2O:C_2H_5OH = 1:1:1 Time: 3 (min) Thickness of porous Si: 3 (μm) Porosity: 15(%)"

CLAIM	**Support in Specification of Application No. 10/085,046**
	The anodization described in paragraph 0411, and the anodizations described in paragraphs 0661 and 0662, form a second porous layer within a first porous layer, especially since in the latter case the anodizations described in paragraphs 0660 and 0662 each result in substantially a same, first porosity being provided.
forming at least one semi-conductor film on said surface; and	Paragraph 0408 states that "On the porous layer 101 thus formed, a non-porous single-crystal silicon layer 102 is epitaxially grown . . . ." See also, e.g., paragraph 0663 which states that "Single-crystal Si was epitaxially grown . . . on porous Si . . . ." The "porous layer 101" or "porous Si" is adjacent (and defines) the surface, and the silicon layer is formed on that surface.
separating said semi-conductor film from said semi-conductor substrate along a line of relative weakness defined in or adjacent one of said first and second porous layers.	Paragraph 0415 states that "the substrates are separated into two at the porous Si layer having the large porosity."

CLAIM	Support in Specification of Application No. 10/085,046
	Also, e.g., paragraph 0666 states that "The bonding wafer was . . . divided perfectly in the porous Si layer into two substrates after one hour. The portion with the higher porosity was structurally fragile, so that division started from the fragile portion." See also, e.g., paragraph 0118. The separation occurs wherever there is a line of greatest relative weakness, whether within or adjacent one of the first and second porous layers, just as in Application No. 10/085,046.

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EXHIBIT I

CLAIM	Support In Specification Of Application No. 10/085,046
CLAIM 157	
A method for making a thin film semi-conductor comprising the steps of:	Paragraphs 0405 to 0416 describe a process of preparing a semiconductor substrate, and paragraph 0371 refers in general to forming a thin film in accordance with the invention. Paragraph 0409 also refers to a "thin film" in the context of Embodiment 11.
providing a semi-conductor substrate having a surface;	Paragraph 0406 refers to "a single-crystal Si substrate 100 . . . anodized . . . [, and] one surface layer of the substrate." Also, paragraph 0407 states that "as the substrate, a p-type single-crystal silicon substrate 600 is prepared." The substrate has a surface.
forming a first porous layer adjacent said surface having a first porosity;	Paragraph 0406 states "First, a single-crystal Si substrate 100 is anodized to form a porous Si layer 101." The anodizing occurs at a first current density, and provides a first porous layer adjacent the surface of the substrate.
forming a second porous layer within said first porous layer having a second porosity higher than	

CLAIM	Support In Specification Of Application No. 10/085,046
said first porosity; and	Paragraph 0411 states that "ion implantation is performed to form a layer with large porosity in the porous Si layer 101", and Paragraph 0415 stats "The layer having the large porosity can be formed by altering current in the anodization besides the ion implantation." Also, paragraph 0407 states that "In general, as the current value increases, the anodization speed increases and the density of the porous Si layer decreases. That is, the volume of the pores increases." The anodizing of paragraph 0415 occurs at a second current density and forms a second porous layer adjacent the first porous layer opposite the surface.
separating an upper portion of said semi-conductor substrate from said semi-conductor substrate along a line of relative weakness defined in or adjacent said second porous layer.	Paragraph 0271 states that "A sufficient pulling force was applied to the resulting bonding wafer in the direction perpendicular to the bonded wafer face . . . [,t]hereby, the porous Si layer was broken to allow the wafer to separate into two sheets with the porous Si layers exposed."

CLAIM	Support In Specification Of Application No. 10/085,046
	Paragraph 0118 states that "the present invention permits the internal pressure to be exerted only on the porous Si layer by utilizing oxidation . . ., excellent in uniformity, and by combining high-speed oxidizability of porous Si, volume expansion of porous Si, and fragility of porous Si, whereby the wager can be split with good controllability in and through the porous Si layer." Also, paragraph 0170 states that "on application of a tensile force, a compressive force, or a shearing force to a laminated wafer, the porous layer will be broken first. The larger the porosity of the porous layer, the less force is needed for the breakdown of the layer." See also, e.g., paragraphs 0316, 0326, 0415, 0170, and 0666. The separation occurs wherever there is a line of greatest relative weakness, whether within or adjacent the second porous layer, just as in

CLAIM	Support In Specification Of Application No. 10/085,046
	Application No. 10/085,046.

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EXHIBIT K

In this Exhibit K, the proposed interference count is compared to the disclosure of application Serial No. 08/401,237, to demonstrate support in that application for the count.

(Claim 77 of Appl. Serial No. 10/085,046)	Serial No. 08/401,237
A method for making a thin film semi-conductor comprising the steps of:	Examples 6, 11 and 12 disclose a method for making a thin film semi-conductor.
providing a semi-conductor substrate having a surface;	Examples 6, 11 and 12 provide a monocrystalline silicon substrate of a diameter of five inches. The substrate has a surface.
forming a first porous layer adjacent said surface having a first porosity;	The monocrystalline silicon substrate in Examples 6, 11 and 12 is anodized for four minutes at a 8mA/cm^2 current density to form a first porous layer with a first porosity of 15%. The porous layer is formed adjacent the substrate's surface. See, e.g., Figure 1.
forming a second porous layer having a second porosity higher than said first porosity;	The monocrystalline silicon substrate in Examples 6, 11 and 12 is subject to further anodization for three minutes at a 30 mA.cm^2 current density to form a second porous layer having a second porosity of 45%, which is higher than the first porosity of 15%.
forming a semi-conductor film on said surface; and	An epitaxial monocrystalline silicon film was formed on the porous silicon in Examples 6, 11 and 12.
separating said semi-conductor film from said semi-conductor substrate.	In Examples 6, 11 and 12, a pulling force is used to separate the silicon film from the semi-conductor substrate.

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EXHIBIT L

In this Exhibit L, the proposed interference count is compared to the disclosure of application Serial No. 08/729,722, to demonstrate support in that application for the count.

(Claim 77 of Appl. Serial No. 10/085,046)	Serial No. 08/729,722
A method for making a thin film semi-conductor comprising the steps of:	The application discloses a method for making a thin film semi-conductor.
providing a semi-conductor substrate having a surface;	In the first embodiment, a single-crystal silicon substrate 11 is provided. The substrate has a surface.
forming a first porous layer adjacent said surface having a first porosity;	A first porous layer 12 is formed in the first embodiment with a first porosity.
forming a second porous layer having a second porosity higher than said first porosity;	In the first embodiment, a second porous layer 13 is formed in first porous layer 12 with a second porosity higher than the first porosity.
forming a semi-conductor film on said surface; and	A semi-conductor film is formed on the surface, such as a silicon film or a compound semi-conductor film. See page 44, lines 6-12.

separating said semi-conductor film from said semi-conductor substrate.	The semi-conductor film is separated from the semi-conductor substrate. See page 41, lines 9-14.

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EXHIBIT M

In this Exhibit M, of the proposed interference count is compared to the disclosure of application Serial No. 08/807,604, to demonstrate support in that application for the count.

(Claim 77 of Appl. Serial No. 10/085,046)	Serial No. 08/807,604
A method for making a thin film semi-conductor comprising the steps of:	The application discloses methods for making thin film semi-conductors.
providing a semi-conductor substrate having a surface;	In example 4, a six inch diameter semi-conductor substrate is provided. The wafer has a surface.
forming a first porous layer adjacent said surface having a first porosity;	The substrate in example 4 is subjected to a 7 mA/cm^2 current density when immersed in an HF solution for 3 minutes to form a first porous layer adjacent the surface having a first porosity of 15%.

forming a second porous layer having a second porosity higher than said first porosity;	The substrate in example 4 is subjected to a further 30 mA/cm^2 current density when immersed in an HF solution for 3 minutes to form a second porous layer adjacent the surface having a second porosity of 45%, which is higher than the first porosity of 15%. This second porous layer is within the first porous layer.
forming a semi-conductor film on said surface; and	In example 4, a single crystal silicon film was epitaxially grown by CVD on the surface.
separating said semi-conductor film from said semi-conductor substrate.	A pyro-oxidation is performed at 1000 degrees Celsius in example 4, which causes the semiconductor film to separate from the semiconductor substrate.

EXHIBIT N

In this Exhibit N, the proposed interference count is compared to the disclosure of Japanese application JP 6-039389, to demonstrate support in that application for the count.

(Claim 77 of Appl. Serial No. 10/085,046)	Japanese Application JP 6-039389
A method for making a thin film semi-conductor comprising the steps of:	Examples 6, 11 and 12 describe a method for making a thin film semi-conductor.
providing a semi-conductor substrate having a surface;	Examples 6, 11 and 12 provide a monocrystalline silicon substrate five inches in diameter. The substrate has a surface.
forming a first porous layer adjacent said surface having a first porosity;	In Examples 6, 11 and 12, a 7 mA/cm^2 current is applied for four minutes to form a first porous layer having a first porosity of 15%. [0139, 0195, 0207]
forming a second porous layer having a second porosity higher than said first porosity;	In Examples 6, 11 and 12, a 30 mA/cm^2 current is subsequently applied for three minutes to form a second porous layer within the first porous layer having a porosity of 45%. [0139, 0195, 0207]

forming a semi-conductor film on said surface; and	Examples 6, 11 and 12 grow an epitaxial silicon layer on the surface to a thickness of 0.3μm, thereby forming a semi-conductor film on the surface.
separating said semi-conductor film from said semi-conductor substrate.	In Examples 6, 11 and 12, the semi-conductor film is separated from the semi-conductor substrate. [0142, 0198, 0210]

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EXHIBIT O

In this Exhibit O, the proposed interference count is compared to the disclosure of Japanese application JP 7-045441, to demonstrate support in that application for the count.

(Claim 77 of Appl. Serial No. 10/085,046)	Japanese Application JP 7-045441
A method for making a thin film semi-conductor comprising the steps of:	Examples 6, 11 and 12 describe a method for making a thin film semi-conductor.
providing a semi-conductor substrate having a surface;	In Examples 6, 11 and 12, there is provided a monocrystalline silicon substrate five inches in diameter.
forming a first porous layer adjacent said surface having a first porosity;	In Examples 6, 11 and 12, a 7mA/cm^2 current is applied for four minutes to form a first porous layer having a first porosity of 15%. [0139, 0195, 0207]
forming a second porous layer having a second porosity higher than said first porosity;	In Examples 6, 11 and 12, a 30 mA/cm^2 current is subsequently applied for three minutes to form a second porous layer within the first porous layer having a porosity of 45%. [0139, 0195, 0207]

forming a semi-conductor film on said surface; and	In Examples 6, 11 and 12, an epitaxial silicon film is grown on the surface to a thickness of 0.3μm, thereby forming a semi-conductor film on the surface. [0145-46, 0198-99, 0210-11]
separating said semi-conductor film from said semi-conductor substrate.	In Examples 6, 11 and 12, the semiconductor film is separated from the semi-conductor substrate. [0142, 0198, 0210]

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EXHIBIT P

In this Exhibit P, the proposed interference count is compared to the disclosure of Japanese application JP 7-260100, to demonstrate support in that application for the count.

(Claim 77 of Appl. Serial No. 10/085,046)	Japanese Application 7-260100
A method for making a thin film semi-conductor comprising the steps of:	The application discloses a method for making a thin film semi-conductor.
providing a semi-conductor substrate having a surface;	In the first embodiment, a single-crystal substrate 11 is provided. [0089] The substrate has a surface.
forming a first porous layer adjacent said surface having a first porosity;	A first porous layer 12 is formed in the first embodiment with a first porosity. [0089]
forming a second porous layer having a second porosity higher than said first porosity;	A second porous layer 13 (see Fig. 1(b)) is formed in the first embodiment within the first porous layer 12. [0089]
forming a semi-conductor film on said surface; and	A semiconductor film is formed on the surface, such as a compound semiconductor film or a non-porous single-crystal silicon film. [0088]
separating said semi-conductor film from said semi-conductor substrate.	In the method of the application, the semi-conductor film is separated from the semi-conductor substrate [e.g., 0045, 0079, 0092].
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Exhibit Q

In this Exhibit Q, the proposed interference count is compared to the disclosure of Japanese application JP 8-041709, to demonstrate support in that application for the count.

(Claim 77 of Appl. Serial No. 10/085,046)	Japanese Application JP 8-041709
A method for making a thin film semi-conductor comprising the steps of:	The application discloses a method for making thin film semi-conductors.
providing a semi-conductor substrate having a surface;	In Example 4, a six inch diameter semi-conductor substrate is provided. The substrate has a surface. [0117]
forming a first porous layer adjacent said surface having a first porosity;	The substrate in Example 4 is subjected to a 7 mA/cm^2 current density when immersed in an HF solution for three minutes to form a first porous layer adjacent the surface having a first porosity of 15%. [0117-18]
forming a second porous layer having a second porosity higher than said first porosity;	The substrate in Example 4 is subjected to a further 30 mA/cm^2 current density when immersed in an HF solution for three minutes to form a second porous layer adjacent the surface having a second porosity of 45%, which is higher than the first porosity of 15%. [0117-18]

forming a semi-conductor film on said surface; and	In Example 4, a single crystal silicon film is epitaxially grown by CVD on the surface. [0118-19]
separating said semi-conductor film from said semi-conductor substrate.	A thermal oxidation is performed in Example 4 at 1000 degrees Celsius, which separates the semi-conductor film from the semi-conductor substrate. [0121]

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EXHIBIT R

In this Exhibit R, the proposed interference count is compared to the disclosure of Japanese application JP 8-264386, to demonstrate support in that application for the count.

(Claim 77 of Appl. Serial No. 10/085,046)	Japanese Application JP 8-264386
A method for making a thin film semi-conductor comprising the steps of:	The application discloses a method of making a thin film semi-conductor. [0045]
providing a semi-conductor substrate having a surface;	A semiconductor silicon substrate is provided. The substrate has a surface. [0045] See for example embodiment 1, in which Si single-crystal substrate 11 is prepared. [0084]
forming a first porous layer adjacent said surface having a first porosity;	A first porous silicon layer is formed on the surface of the silicon substrate. [0045] See for example embodiment 1, in which porous layer 12 is prepared. [0084]
forming a second porous layer having a second porosity higher than said first porosity;	A high porosity layer is formed in the first porous layer. [0045] For example, in embodiment 1 a porous layer 13, having a high porosity, is formed in the porous layer 12. [0084]

forming a semi-conductor film on said surface; and	A semiconductor film, such as a non-porous single-crystal Si film, or a compound semiconductor film, such as GaAs or InP, is formed on the surface. [0083]
separating said semi- conductor film from said semi-conductor substrate.	The semi-conductor film is separated from the semi-conductor substrate. [0045]

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